

MEMORY MAP

SEGMENT	OFFSET	SIZE	POPIS
0000h	0000h	1024	interrupt vector table
	0400h	172	BIOS data area
	04ACh	68	reserved by IBM
	04F0h	16	user communication area
	0500h	256	MS-DOS and BASIC work area
	0600h - 0009FBFFh		user memory
	0009:FC00-0009:FFFF		PS/2-mouse data area
A000h	0000h	64K	EGA
B000h	0000h		MDA/HGC/VGA
	0800h	16K	CGA
C000h	0000h		VIDEO BIOS 16-32K
C800h	0000h		HDD BIOS 8-16K
C000h	0000h	192K	ROM expansion and control area
	8000h		ROM for hard disk
D000h			ROM expansion and control area
E000h			ROM expansion and control area
	000CC000-000CDFFF		Reserved for PC Card
	000F0000-000FFFFF		System BIOS
	00100000-03FFFFFF		High memory area
	FD000000-FDFFFFFF		Video RAM
	FF200000-FF2FFFFFF		Video RAM
	FFFE0000-FFFFFFF		BIOS ROM

IO MEMORY

Address	Device
0000-001F	DMA controller #1
0020-003F	Interrupt controller #1
0040-005F	System timers
0060-006F	Keyboard controller
0070-007F	RTC and nonmaskable interrupt (NMI) enable
0080-009F	DMA page registers
00A0-00BF	Interrupt controller #2
00C0-00DF	DMA controller #2
00F0-00FF	Math coprocessor
0170-0177	CD-ROM drive controller
01F0-01F7	Hard-disk drive controller
0210-0217	Audio controller
0220-022F	Audio controller
0270-0277	Fast IR
0376-0376	Integrated drive electronics (IDE) controller
0378-037F	LPT1
0388-038B	Audio controller
038B-03BB	Video graphics array (VGA)
03C0-03DF	VGA
03E0-03E1	PC Card controller
03E8-03EF	Fast IR
03F0-03F7	Diskette controller
03F8-03FF	COM1
0530-0537	Audio controller
0778-077B	Extended Capabilities Port (ECP) registers
ECE0-ECFF	USB controller
FFA0-FFAF	Peripheral Component Interconnect (PCI)-IDE bus registers



S3 VIDEO MODES

MODE	H	V	C	NOTE
201h	640	480	256	
202h	800	600	16	
203h	800	600	256	
204h	1024	768	16	
205h	1024	768	256	
206h	1280	960	16	
207h	1152	864	256	(Diamond Stealth 64)
208h	1280	1024	16	
209h	1152	864	32K	
20Ah	1152	864	64K	(Diamond Stealth 64)
20Bh	1152	864	4G	
211h	640	480	64K	(Diamond Stealth 24)
211h	640	400	4G	(Diamond Stealth64)
212h	640	480	16M	(Diamond Stealth 24)
301h	640	480	32K	

MOV AX,
INT 10H

VIDEO MODES

Mode#	Horiz. Res.	Vert. Res.	# Colors	Starting Address	Notes:
00h	40	25	B&W	B800	Text Only
01h	40	25	16	B800	Text Only
02h	80	25	B&W	B8000	Text Only
03h	80	25	16	B800	Standard Text Mode
04h	320	200	4	B800	Graphics
05h	320	200	4 grays	B800	Graphics
06h	640	200	B&W	B800	Graphics
07h	80	25	Mono	B000	Text Only
08h	160	200	16	B800	Graphics
09h	320	200	16	B800	Graphics
09h	320	200	16	B800	Graphics
0Ah	640	200	4	B800	Graphics
0Dh	320	200	16	A000	Graphics
0Eh	640	200	16	A000	Graphics
0Eh	640	200	16	A000	Graphics
0Fh	640	350	Mono	A000	Graphics
10h	640	350	4	A000	Graphics
11h	640	480	2	A000	Graphics
12h	640	480	16	A000	Graphics
13h	320	200	256	A000	Easy graphics
100h	640	400	256	A000	HIGH RES
101h	640	480	256	A000	HIGH RES
102h	800	600	16	A000	HIGH RES
103h	640	480	256	A000	HIGH RES
104h	1024	768	16	A000	HIGH RES
105h	1024	768	256	A000	HIGH RES
106h	1280	1024	16	A000	HIGH RES
107h	1280	1024	256	A000	HIGH RES
108h	80	60	?	B800	HIGH RES TEXT
109h	132	25	?	B800	HIGH RES TEXT
10Ah	132	43	?	B800	HIGH RES TEXT
10Bh	132	50	?	B800	HIGH RES TEXT
10Ch	132	60	?	B800	HIGH RES TEXT
10Dh	320	200	32768	A000	HIGH RES
10Dh	320	200	32768	A000	HIGH RES
10Eh	320	200	65536	A000	HIGH RES
10Fh	320	200	16,777,216	A000	HIGH RES
1A0h	640	480	32768	A000	HIGH RES
111h	640	480	65536	A000	HIGH RES
112h	640	480	16,777,216	A000	HIGH RES
113h	800	600	32768	A000	HIGH RES
114h	800	600	65536	A000	HIGH RES
115h	320	200	16,777,216	A000	HIGH RES
116h	1024	768	32768	A000	HIGH RES
117h	1024	768	65536	A000	HIGH RES
118h	1024	768	16,777,216	A000	HIGH RES
119h	1280	1024	32768	A000	HIGH RES
11Ah	1280	1024	65536	A000	HIGH RES
11Bh	1280	1024	16,777,216	A000	HIGH RES
120h	1600	1200	256		HIGH RES
121h	1600	1200	32K		HIGH RES
122h	1600	1200	64K		HIGH RES
81FFh					special full-memory access mode [17]

VESA MODES

VBE 1.2

2.0